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75	90 03/25/2004	EXAMINER		
SUGHRUE, M	•	ABRAHAM, ESAW T		
MACPEAK & SEAS, PLLC 2100 PENNSYLVANIA AVENUE, N.W.			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037-3202			2133	
			DATE MAILED: 03/25/2004	1 · /s

Please find below and/or attached an Office communication concerning this application or proceeding.

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r		Applicat	tion No.	Applicant(s)	- /u		
		09/783,	126	PARK ET AL.			
Office Ac	tion Summary	Examine	er	Art Unit			
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The MAILING Period for Reply	DATE of this commun	ication appears on th	ne cover sheet with the	correspondence addre	SS		
THE MAILING DATE  - Extensions of time may be after SIX (6) MONTHS from  - If the period for reply specified if NO period for reply is specified by the Company reply received by reply received by the Company reply reply received by the Company reply re	OF THIS COMMUN available under the provisions in the mailing date of this committed above is less than thirty (3 scified above, the maximum stet or extended period for reply	ICATION. of 37 CFR 1.136(a). In no enunication. i) days, a reply within the statutory period will apply and will, by statute, cause the apply and the statute.	vent, however, may a reply be tile atutory minimum of thirty (30) day will expire SIX (6) MONTHS from plication to become ABANDONE communication, even if timely file	mely filed ys will be considered timely. In the mailing date of this committee (35 U.S.C. § 133).	unication.		
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2a) ☐ This action is F	communication(s) file	ed on <u>75 February 20</u> 2b)⊠ This action is					
′ <u> </u>		<i>'</i> —		assoution as to the me	orite is		
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims	annee min me praes	oo amaar 2x parto q	aayro, 1000 C.B. 11, 4	0.0.210.			
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5) ☐ Claim(s) 6) ☑ Claim(s) <u>1-39</u> i 7) ☐ Claim(s)	e claim(s) is/a is/are allowed.	re withdrawn from c					
Application Papers							
9)☐ The specification	n is objected to by th	e Examiner.					
10) The drawing(s)	filed on is/are:	a) ☐ accepted or b	)□ objected to by the	Examiner.			
Applicant may no	ot request that any obje	ction to the drawing(s)	be held in abeyance. Se	e 37 CFR 1.85(a).			
			ired if the drawing(s) is ob lote the attached Office	•	` '		
Priority under 35 U.S.C	. § 119						
a)⊠ All b)⊡ So  1.⊠ Certified  2.□ Certified  3.□ Copies of application	me * c) None of: copies of the priority copies of the priority f the certified copies on from the Internatio	documents have be documents have be of the priority docum nal Bureau (PCT Ru	en received in Applicat nents have been receiv	ion No ed in this National Sta	ge		
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1) Notice of References Cit			4) Interview Summary				
<ol> <li>Notice of Draftsperson's</li> <li>Information Disclosure S Paper No(s)/Mail Date #</li> </ol>	tatement(s) (PTO-1449 or		Paper No(s)/Mail D 5) Notice of Informal 6 6) Other:	ate Patent Application (PTO-152	2)		

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### **DETAILED ACTION**

1. Claims 1 to 39 are presented for examination.

### **Priority**

Acknowledgment is made of applicant's claim for foreign priority under 35
 U.S.C. 119(a)-(d).

## Information Disclosure Statement

3. The examiner has been considered the references listed in the information disclosure statement submitted on 01/29/2003 (see attached PTO-1449).

## Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included and excluded by the claim language with the use of the phrase: "possibility of an error correction". This claim is an omnibus type claim.

### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 5. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. PN: 6,665,313).

As per claims 1, 4, 5, and 39, Chang et al. teach or disclose a frame transmitted according to a radio link protocol (RLP), and a device and method for transmitting and receiving a frame in a mobile communication system whereby the frame is comprised of a plurality of multiplex frames each having a given length and further each are comprised of a header and a succeeding RLP frame and further the RLP frame includes at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames whereby each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of a transmission data, and a data block associated to the succeeding RLP frame (see col. 2, lines 40-54). Chang et al. teach a controller (see figure 2 element 140) makes a multiplex frame include a data block adding a service identifier and a length indication field to know a service for transmitting the data block received from the controller of the receiving side when receiving the data block from the service and further the multiplex frame include several data

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blocks and signaling messages provided from several services wherein an information bits include one or several multiplex frames and can further include a CRC (Cyclic Redundancy Code) for checking errors (see col. 6, lines 6-40 and col. 7, lines 26-65). However, Chang et al. do not explicitly teach the term or phrase 'catalog of information related to application data service", Chang et al. teach a controller (see figure 2 element 140) makes a multiplex frame include a data block adding a service identifier and a length indication field to know a service for transmitting the data block received from the controller of the receiving side when receiving the data block from the service (see col. 6, lines 6-40) and further Chang et al. teach six services using the RLP are connected, the controller (140) of the transmission side operates according to the procedure shown in figure 9, the controller (140) of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule whereby controller (140) determines the order of transmitting the services (Step S11a – S17) (see the tables in columns 9-13 and col. 13, lines 41-61) which the system of Chang et al. is dealing with plurality of cataloged or listed services selected according to the QoS rule. Therefore, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to implement a data catalog or list or dictionary relating to application data service. This modification would have been obvious because a person having ordinary skill in the art would have been motivated in order to permit flexibility in selection of application data service that result in enhancing link or channel performance and ensure greater data accuracy.

As per claim 2, Chang et al. teach all the subject matter claimed in claim 1 including a

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frame is comprised of a plurality of consecutive multiplex frames each having a given length.

The multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data (see col. 2, lines 40-53).

As per claim 3, Chang et al. teach all the subject matter claimed in claim 1 including Chang et al. teach the physical layer processor (150) of the receiving side, shown in FIG. 2, analyzes a received signal using a designated decoding and demodulation method, and transmits the information bits filled in the received physical frame to the received physical frame to the controller (140) of the receiving side (see col. 7, lines 26-57).

As per claims 6 and 9, Chang et al. teach all the subject matter claimed in claims 1 and 4 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claim 7, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claim 8, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several

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MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims 10, 13, and 14, Chang et al. teach all the subject matter claimed in claims 1, 4 and 5 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of submultiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claim 11, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claim 12, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach a frame comprised of a plurality of consecutive multiplex frames each having a given length and further the multiplex frames each are comprised of a header and

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a succeeding RLP frame, and the RLP frame includes transmission data and furthermore at least one of the multiplex frames is comprised of a plurality of sub-multiplex frames, and each sub-multiplex frame is comprised of a header including an RLP service identifier field and a length indication field for indicating a length of the transmission data, and a data block associated to the succeeding RLP frame (see abstract).

As per claims 15, 18-20, 23, 24, 29 and 32, Chang et al. teach all the subject matter claimed in claims 1, 4 and 5 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims 16, 21 and 30, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims 17, 22 and 31, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach six services using the RLP are connected, the controller of the transmission side operates according to the procedure shown in figure 9, the controller 140 of figure 3 determines the transmitting order of the services and the size of the data blocks

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according to QoS (Quality of Service) guarantee rule and further the controller determines the order of transmitting the services (Step S11a – S17) (see col. 13, lines 41-61).

As per claims 25 and 28, Chang et al. teach all the subject matter claimed in claims 1 and 5 including Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller 150 of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME\_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65).

As per claim 26, Chang et al. teach all the subject matter claimed in claims 1 and 2 including Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller 150 of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME\_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65 and ).

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As per claim 27, Chang et al. teach all the subject matter claimed in claims 1 and 3 including Chang et al. teach that when there is no signaling message or data block to be transmitted, the controller (140) can transmit the null value to the physical channel with SDU or transmit a regular bit pattern previously appointed with the controller of the receiving side of the physical channel as the information bits (see col. 6 last paragraph) and further if the controller (150) of the receiving side fills the SDU with the null value, judging that no physical channel frame is received, and informs the FRAME\_QUALITY that a valid frame is received, then the controller 140 of the receiving side informs all the services corresponding to the physical channel to which the logical channel is connected that no frame is received (see col. 7, lines 58-65).

As per claims 33 and 36, Chang et al. teach all the subject matter claimed in claims 1 and 29 including Chang et al. teach that the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims 34 and 37, Chang et al. teach all the subject matter claimed in claims 1, 2 and 30 including Chang et al. teach that the multiplex frame MuxPDU can include several data blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

As per claims 35 and 38, Chang et al. teach all the subject matter claimed in claims 1, 3 and 31 including Chang et al. teach that the multiplex frame MuxPDU can include several data

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blocks and signaling messages provided from several services. The information bits include one or several MuxPDUs, and can further include a CRC (Cyclic Redundancy Code) for checking errors every one or several MuxPDUs (see col. 6, lines 6-23).

### Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US PN: 6,590,882 Fong et al.

US PN: 6,542,490 Ahmadvand et al.

US PN: 6,313,768 Allen

US PN: 6,553,038 Fukuda

US PN: 6,519,223 Wagner et al.

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (703) 305-7743. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Esaw Abraham

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Albert DeCady

Primary Examiner

epuy J. Lamane

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